AIR QUALITY FULL COMPLIANCE EVALUATION REPORT

AS 46.14.515

Stationary Source Evaluated:	Milne Point Production Facility (MPU)
Owner/Operator:	Hilcorp Alaska, LLC
Air Quality Permit:	AQ0200TVP02 Rev. 4 AQ0200MSS04 Rev. 3 (rescinded March 12, 2019) AQ0200MSS05 (rescinded March 12, 2019) AQ0200MSS06 (rescinded March 12, 2019) AQ0200MSS07 (rescinded March 12, 2019) AQ0200MSS08 (effective March 12, 2019)
Location:	70°27'27.89" N, 149°26'29.47" W
Period Covered by Evaluation:	July 1, 2017 through August 31, 2019
Date of On-Site Visit:	July 17, 2019
Date of Report:	September 19, 2019
Evaluator(s):	Breanna Howard, Environmental Program Specialist
Facility Representative(s):	Stefan Gogosha, Air Quality Advisor
Weather Condition at Time of On-Site Visit:	Broken Cloud Coverage, 60° F, wind 10 mph

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I. Evaluation Summary

The Alaska Department of Environmental Conservation (ADEC) conducted an Air Quality Full Compliance Evaluation (FCE) of the Hilcorp Alaska, LLC's Milne Point Production Facility covering the period June 30, 2017 through August 31, 2019. The purpose of the evaluation was to determine if the stationary source was in compliance with terms and conditions of Air Quality Operating Permit No. AQ0200TVP02 Rev. 4, Minor Operating Permit No. AQ0200MSS08 and Alaska Air Quality Control Regulations. This FCE includes a comprehensive review of records and files and was conducted with an on-site visit.

Based on the scope of this evaluation, the stationary source was determined to be intermittently out of compliance with Conditions 87, 88 and 90 of Permit No. AQ0200TVP02 Rev. 4 and NSPS Subpart OOOOa §60.5397(h)(1).

II. Stationary Source Description

The Milne Point Production Facility (MPU) is an oil and gas exploration and production operation. MPU is owned and operated by Hilcorp Alaska, LLC following a transfer of ownership from BP Exploration Alaska (BPXA) on November 18, 2014. Fuel gas, crude oil, and water are extracted from the subsurface of the associated well pads at MPU. This mixture of gas and fluids is transported by pipeline to the Central Facility Pad (CFP) where the gas, crude, and water are separated. Some of the fuel gas is used as fuel in the combustion equipment at the CFP and well pads; the remainder is compressed and re-injected back into the reservoir. Separated water is also re-injected into the reservoir. The Standard Industrial Code (SIC) for this facility is 1311 - Oil and gas extraction / Crude Petroleum and Natural Gas.

Hilcorp currently operates MPU under Title V application shield, and Minor Permit AQ0200MSS08. Hilcorp previously operated under Minor Permits AQ0200MSS04 Rev. 3, AQ0200MSS05, AQ0200MSS06, and AQ0200MSS07 until Hilcorp requested the permit under 18 AAC 50.508(6) in order to revise terms or conditions previously established in a Title I permit. The request regards the disaggregation of MPU which requires the simultaneous issuance of multiple minor permits. The Department is therefore concurrently issuing Minor Permit AQ0200MSS08 with Minor Permits AQ1558MSS01 (for Milne Point Unit (MPU) B-Pad), and Minor Permit AQ1559MSS01 (for MPU C-Pad). Previous Minor Permit AQ0200MSS04 Rev. 3 authorized the Permittee to use Direct Water Injection (DWI) in EUs 1 and 2 when firing liquid fuel. It also consolidated all previous Title I permits. Previous Minor Permit AQ0200MSS05 authorized the continued operation of three supplemental turbines that were originally authorized for only a limited time under Minor Permit AQ0200MSS01. Previous Minor Permit AQ0200MSS06 authorized the concurrent operation of up to 12 transportable drill rigs at "aggregated well pads associated with the Milne Point Production Facility." Previous Minor Permit AQ0200MSS07 disaggregated Pads A, D, and F through K from MPU.

III. Significant Emission Units

The table below identifies the significant emission units at the stationary source as authorized under the permit.

EU ID	Tag No.	Location	Make/Model or Other Identifier	Nominal	Maximum	Fuel Type	Actual Date Installed or Modified
Turbines							
1	PU-0701	CFP	GE LM-2500	29,500 Hp ISO	29,500 Hp ISO	Fuel Gas & Liquid Fuel	1985
2	PU-0801	CFP	GE LM-2500	29,500 Hp ISO	29,500 Hp ISO	Fuel Gas & Liquid Fuel	1985
~~CP-4~~	~~GT-2901~~	~~C-Pad~~	~~Solar Saturn 20-T1600 Abandoned/Fuel Line Air Gapped~~	--	~~1,585 (full-load, ISO)~~	~~Fuel Gas~~	~~1988~~
T-1	--	CFP	Solar Taurus Not On-site	--	5.2 MW	Fuel Gas	TBD[1]
T-2	--	CFP	Solar Taurus Not On-site	--	5.2 MW	Fuel Gas	TBD[1]
T-3	--	CFP	Solar Taurus Not On-site	--	5.2 MW	Fuel Gas	TBD[1]
Heaters							
3	G-5302A	CFP	Thermoflux	30.0 MMBtu/hr	30.5 MMBtu/hr	Fuel Gas	1995
4	H-5302B	CFP	Thermoflux	30.0 MMBtu/hr	30.5 MMBtu/hr	Fuel Gas	1995
5	H-4510A	E-Pad	Latoka	14.4 MMBtu/hr	14.4 MMBtu/hr	Fuel Gas	1995[2]
6	H-4510B	E-Pad	Latoka	14.4 MMBtu/hr	14.4 MMBtu/hr	Fuel Gas	1995[2]
7	H-5701A	CFP	Thermoflux	22.7 MMBtu/hr	29.0 MMBtu/hr	Fuel Gas & Liquid Fuel	1985
8	H-5701B	CFP	Thermoflux	22.7 MMBtu/hr	29.0 MMBtu/hr	Fuel Gas & Liquid Fuel	1985
~~9~~	~~H-2001A~~	~~B-Pad~~	~~Thermoflux Decommissioned~~	~~9.8 MMBtu/hr~~	~~12.0 MMBtu/hr~~	~~Fuel Gas~~	~~1985~~
~~10~~	~~H-2001B~~	~~B-Pad~~	~~Thermoflux Decommissioned~~	~~9.8 MMBtu/hr~~	~~12.0 MMBtu/hr~~	~~Fuel Gas~~	~~1985~~
~~CP-1~~	~~H-2601~~	~~C-Pad~~	~~Thermoflux~~	--	~~26.6 MMBtu/hr~~	~~Fuel Gas~~	~~1985~~
~~CP-2~~	~~H-2603~~	~~C-Pad~~	~~Thermoflux~~	--	~~25.0 MMBtu/hr~~	~~Fuel Gas~~	~~1995~~
Engines[3]							
11	PU-0101A	CFP	Detroit Diesel	1,500 Hp	1.0 MW	Liquid Fuel	1985
12	PU-0101B	CFP	Detroit Diesel	1,500 Hp	1.0 MW	Liquid Fuel	1985
13	PU-0101C	CFP	Detroit Diesel	1,500 Hp	1.0 MW	Liquid Fuel	1985
14[3]	PU-0110A	CFP	Cummins	187 Hp	187 Hp	Liquid Fuel	1985
15[3]	PU-0110B	CFP	Cummins	187 Hp	187 Hp	Liquid Fuel	1985

~~16[5]~~	~~PU-4703~~	~~CFP~~	~~Cummins Removed from Facility~~	~~173 Hp~~	~~173 Hp~~	~~Liquid Fuel~~	~~1985~~
~~17~~	~~PU-2004~~	~~B-Pad~~	~~Cummins Abandoned In Place/Fuel Blinded~~	~~600 Hp~~	~~0.448 MW~~	~~Liquid Fuel~~	~~1985~~
~~CP-3~~	~~PU-2604~~	~~C-Pad~~	~~Cummins KTA 19-G2~~	~~--~~	~~600 Hp~~	~~Liquid Fuel~~	~~1985~~
~~CP-6[3]~~	~~E-2610~~	~~C-Pad~~	~~Superior~~	~~--~~	~~1,600 Hp~~	~~Fuel Gas~~	~~1995~~
Flares							
18	Flare	CFP	National, Inc.	0.34 MMscf/day	83 MMscf/day	Fuel Gas	1985
18A	Flare	CFP					
Vents							
~~21~~	~~--~~	~~B-Pad~~	~~Process Vent~~	~~--~~	~~--~~	~~--~~	~~1985~~
~~CP-7~~	~~--~~	~~C-Pad~~	~~Process Vent~~	~~--~~	~~--~~	~~--~~	~~1985~~
23	T-6001 & T-6101B	CFP	Oil Reserve Tanks	--	--	--	1985
25	--	CFP	Glycol Dehydration Unit	--	--	--	--
~~26~~	~~T-9016~~		~~Gasoline Storage Tank~~	~~--~~	~~9,500 gallon~~	~~--~~	~~TBD~~
~~CP-5~~	~~T-2602~~	~~C-Pad~~	~~Methanol Storage Tank~~	~~10,500 gallon~~	~~11,856 gallon~~	~~--~~	~~1985~~

1. EU IDs T-1, T-2, and T-3 are temporary turbines that will be used for power generation when EU IDs 1 and 2 are not available.
2. For the purpose of NSPS applicability, the installation or modification date for EU IDs 5 and 6 is 1984, because the heaters were originally installed at the ARCO Alaska Kuparuk River Unit West Sak Pilot Plant in 1984. They were moved from West Sak to MPU E-pad in 1995.
3. EU IDs 14, 15, 16 and CP-6 are non-emergency engines per Hilcorp letters of August 2, 2012 and August 23, 2012 for purposes of NESHAP ZZZZ. Other engines listed are emergency units.

On July 29, 2019, the stationary source reported units operating at B-Pad and C-Pad were disaggregated on March 12, 2019.

IV. Compliance Background

The previous FCE covered the period October 1, 2015 through June 30, 2017. The Stationary Source was found to be operating **intermittently out of compliance** with Conditions 1.5, 2.1(b), 31.1(a), 31.1(e), 31.1(f), 31.2, 37.1, 56.1(c), 94(c)(i) and 105 of Permit No. AQ0200TVP02 Rev. 4 and Alaska Air Quality Control Regulations. No further actions were required if Hilcorp maintained compliance.

V. Federal Standards (NSPS/NESHAP)

A. 40 CFR 60 NSPS Subpart A

EU IDs 1 through 4, CP-2, CP-4 and T-1 through T-3 are NSPS affected facilities and are therefore also subject to NSPS Subpart A. Conditions 15 – 22 list the general provision requirements for NSPS Subpart A. Through these conditions, MPU is required to maintain records and report occurrences of construction, startup, shutdown, and malfunction; submit semiannual summary reports including excess emissions and monitoring systems

performance (EEMSP) reports; perform the required source tests and maintain and operate affected units consistent with good air pollution control practices.

- Conditions 17 and 18 of Permit No. AQ0200TVP02 Rev 4 applies, in conjunction with the requirements under NSPS Subpart GG. EU IDs 1, 2, CP-4 and T-1 through T-3 are affected gas-fired combustion turbines subject to NSPS Subpart GG. Condition 18 requires MPU to submit to the Department and to the EPA a written EEMSP or summary report semiannually by the 30th day following the end of each 6-month period.
- Condition 19. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to Section 7 at such times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test.

Finding(s): During the July 16, 2019 onsite inspection, it was verified no physical or operational change to the existing facilities occurred during the evaluation period. Hilcorp submitted four (4) EEMSP reports during the evaluation period. EU IDs T-1 and T-2 were removed from the facility on October 8, 2013. EU ID T-3 has not been installed at the facility. Hilcorp abided by the source testing requirements of 40 CFR 60 NSPS Subpart A (*See Section X-D: Source Tests*).

In Compliance

B. 40 CFR 60 NSPS Subpart Dc

EU IDs 3, 4 and CP-2 are process crude heaters that were installed or modified after June 9, 1989 and have maximum design heat input capacities ranging between 29 MW (100 MMBtu/hr) and 2.9 MW (10 MMBtu/hr) and are therefore subject to Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Because EU IDs 3, 4 and CP-2 burn only natural gas, they are not subject to the sulfur dioxide (SO_2) standard in 40 CFR 60.42c or the PM standard in 40 CFR. 60.43c. The only applicable requirement is that MPU monitor the amount of fuel combusted in these units per 40 CFR 60.48(g)(1) through (3).

- Condition 23.1. NSPS Subpart Dc Fuel Consumption. For each of EU IDs 3, 4 and CP-2, the Permittee shall record and maintain records of the amount of each fuel combusted during each operating day in each EU; or monitor according to an EPA approved custom fuel monitoring schedule. As an alternative to meeting the requirements of Condition 23, the Permittee may elect to record and maintain records of the amount of fuel gas combusted during each calendar month in each EU.

Finding(s): Hilcorp reported in each quarterly FOR that EU IDs 3 and 4 burn only gas as fuel. Hilcorp has certified compliance with the monitoring and recordkeeping requirements of Condition 23 in the 2017 and 2018 Annual Compliance Certifications (ACCs).

In Compliance

C. 40 CFR 60 NSPS Subpart GG

EU IDs 1, 2 and CP 4 are stationary gas turbines with a heat input at peak load ≥ 10.7 gigajoules per hour (10 MMBtu/hr) at ISO standard day conditions based on lower heating value of the fuels fired that commenced construction after October 3, 1977. They are therefore subject to NSPS Subpart GG - Standards of Performance for Stationary Gas Turbines. Subpart GG includes provisions for both NOx and fuel sulfur compound standards.

EU IDs 1 and 2 are exempt from the NOx limit of Condition 24 during ice fog events (because they use Direct Water Injection (DWI) as a NOx control) and when firing emergency fuel, which includes periods when source tests required by Condition 65.1 are conducted. Condition 25 sets the requirements for EU 1 and EU 2 that Condition 65.1 shall be used as the basis to determine compliance with the NOx emission limit of Condition 24.

The temporary EU IDs T-1, T-2 and/or T-3 shall also comply with applicable parts of 40 CFR 60 Subpart GG, unless the emission unit is required to comply with 40 CFR Subpart KKKK.

1. **NO_x Standards**
   Condition 24 sets forth NOx emission limits of 215 ppmvd for EU IDs 1 and 2 and 150 ppmvd for EU ID CP-4 when firing fuel gas. Periodic source tests are required for EU IDs 1, 2, CP-4 and T-1 through T-3 to demonstrate compliance with the NOx standards based on the schedule below. The Permittee shall keep records of testing conditions, and monthly records of operating hours for any turbine that operates less than 400 hours in any 12 consecutive months.

   - Condition 24.7. EU IDs T-1, T-2 and/or T-3 if subject to 40 CFR 60 Subpart GG, conduct a NOx and O2 source test under 40 CFR. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within one year after exceeding 400 hours of operation in a 12-month period.

   For EU ID CP-4, conduct a NOx and O_2 source test under 40 CFR 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within one year of the effective date of this permit and thereafter within five years of the latest source test. EU ID CP-4 is not required to be commissioned solely for the purposes of completing this source test requirement. If EU ID CP-4 is not re-commissioned at the time the source test is required to be completed, EU ID CP-4 must complete the source test within 180 calendar days after startup.

   Condition 25; Source tests conducted in accordance with Condition 65.1 shall be used as the basis to determine compliance with the NOx emission limit of Condition 24 for EU ID 1 and EU ID 2. Condition 65.1 requires a Relative Accuracy (RA test for NOx and CO every two calendar years with each two-year test between EU IDs 1 and 2.

   Finding(s): Hilcorp certified compliance with the NOx standards in Condition 24 in the 2015 and 2016 ACCs and conducted passing NOx tests on EU ID 1 on

October 22, 2018 and March 23, 2019 and EU ID 2 on October 13, 2017 using RA for NOx and CO- best fit correlation biennially as required. Note that both tests conducted on EU ID 1 failed the RA portion (*See Section X-D: Reports Reviewed– Source Tests for details*). EU IDs T1-T3 were not onsite during the evaluation period. CP-4 has been decommissioned.

In Compliance

2. **SO_2 Standards**
Condition 26. Do not allow the sulfur content for the fuel burned in EU IDs 1, 2 and CP-4 to exceed 0.8 percent by weight. Monitoring of fuels fired in the turbines is required. Annual reporting to EPA and periodic reporting to ADEC is required under Conditions 26.6.a.(i) and 26.6.b. of Operating Permit No. AQ0200TVP02 Rev. 4.

Finding(s): Hilcorp submitted semi-annual reports in 2017, 2018, and the first half of 2019 under Subpart GG in which monthly sulfur monitoring results were included for both fuel oil and natural gas. Diesel oil was delivered to and distributed from MPU's bulk tank and diesel sulfur content did not exceed 3 ppm during the evaluation period. Similarly, monthly H_2S concentration of fuel gas was also reported. The maximum reported H_2S concentration was 24.0 ppm in January 2018.

In Compliance

D. 40 CFR 60 NSPS Subpart KKKK
Subpart KKKK - Standards of Performance for Stationary Combustion Turbines applies to combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction after February 18, 2005. EU IDs T-1, T-2 and T-3 are temporary turbines that will be used for power generation when EU IDs 1 and 2 are not available. T-1, T-2 and T-3 are currently not installed at MPU; however, they may be subject to the NOx and SO_2 standards from Subpart KKKK.

1. **NO_x Standards**
Condition 27. If EU IDs T-1, T-2 and/or T-3 are subject to 40 CFR 60 Subpart KKKK, the Permittee shall meet the NOx emission limit of 150 ppm at 15 percent O2 or 1,100 ng/J of useful output (8.7 lb./MWh). The Permittee shall conduct NOx emission testing annually. If the NOx emission results from two consecutive annual performance tests are less than or equal to 75 percent of the NOx emission limit in Condition 27, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test).

Finding(s): Prior owner BPXA notified the Department that EU IDs T-1 and T-2 were started up on July 28 and 29, 2014 (BPXA originally leased EU ID T-1 in 2013 and the EU first turned over on June 4, 2013) to provide temporary electrical

power to the facility while major maintenance work was conducted on the main turbine generators. They were removed from MPU on October 28, 2014. Both temporary turbines were manufactured in 2001 and are not subject to Subpart KKKK. Per correspondence with the BPXA dated April 7, 2014, EU ID T-3 was never installed at MPU. Hilcorp certified continuous compliance in the 2017 and 2018 ACCs. In addition, during the July 16, 2019 onsite inspection it was verified the units were not onsite.

In Compliance

2. **SO_2 Standard**
Condition 28. NSPS Subpart KKKK SO_2 Standard. If EU IDs T-1, T-2 and T-3 are subject to 40 CFR 60 Subpart KKKK, the Permittee shall comply with the requirements of Condition 28. The Permittee shall not burn in EU IDs T-1, T-2 and T-3, any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb. SO_2/MMBtu) heat input.

Finding(s): Hilcorp certified continuous compliance in the 2017 and 2018 ACCs and that EU ID T-1, T-2 and T-3 did not operate.

In Compliance

E. 40 CFR 60 NSPS Subpart OOOOa
Activities covered under this rule that became effective August 2, 2016 include but are not limited to hydraulic fracturing within oil and gas production fields. Commonly known as "fracking", this process is a well stimulation technique in which rock is fractured by a pressurized liquid (water mixture).

This subpart establishes emission standards and compliance schedules for the control of the pollutant greenhouse gases (GHG). The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after September 18, 2015. This subpart also establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and SO_2 emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification or reconstruction after September 18, 2015. The effective date of the rule is August 2, 2016.

Per 40 CFR 60.5420a (b) the initial report is due, no later than 90 days after the end of the initial compliance period as determined to 60.5410a. The initial compliance period began on August 2, 2016 and ends August 1, 2017; therefore the first annual report would be due by October 30, 2017.

Per 40 CFR 60.5420a(b); CPAI may arrange with the administrator a common schedule on which reports may be submitted so long as the schedule does not extend the reporting period.

Finding(s): Per 40 CFR 60.5420a(b), the initial annual report for OOOOa is due, "no later than 90 days after the end of the initial compliance period as determined according to §60.5410a." The Department received a copy of the initial annual report for OOOOa on April 5, 2018. The Department received the 2018 NSPS Subpart OOOOa report on March 28, 2019.

The EPA conducted a joint inspection with the Department on July 17, 2019 to evaluate Hilcorp's compliance with NSPS Subpart OOOOa at the MPU facility. During the onsite inspection leaks were detected and tagged with flagging tape with the intention of being officially tagged later.

Hilcorp is required by NSPS Subpart OOOOa §60.5397(h)(1) to repair or replace each identified source of fugitive emissions as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions. NSPS Subpart OOOOa §60.5397(h)(2) allows Hilcorp to place the leak on delay of repair for up to two years if the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit. Hilcorp's 2018 Annual NSPS Subpart OOOOa included the Facility Record No. 7, Milne Point Unit B Pad, survey conducted October 18, 2018 that reported the leaking Fugitive Emission Component was successfully repaired on November 19, 2019, 32 days after the leak was detected. The record stated that the component was not placed on delay of repair.

The EPA may at a later date provide the Department with the onsite inspection report which may or may not include additional non-compliance findings.

Out of Compliance with §60.5397(h)(1)

F. 40 CFR 63 NESHAP Subpart A

Condition 30. NESHAP Subpart A. The Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 of Subpart ZZZZ after the compliance dates listed in Condition 31, and Table 3 to Subpart CCCCCC.

Finding(s): Hilcorp certified continuous compliance with the requirement of Condition 30 in the 2017 and 2018 ACCs.

In Compliance

G. 40 CFR 63 NESHAP Subpart ZZZZ

EU IDs 11 through 15, CP-3 and CP-6 are all existing RICE engines located at an area source of hazardous air pollutant (HAP) emissions and subject to Subpart ZZZZ. EU IDs 16 and 17 have been removed from service. EU IDs 11 – 15 and CP-3 are CI engines and are not subject to any emissions limitations while EU ID CP-6 is a SI engine. EU IDs 11, 12, 13 and CP-3 are classified as emergency engines and EU IDs 14, 15 and CP-6 are

considered non-emergency units. EU IDs 14 and 15 are not subject to any emission limitations since they are rated at <300 hp. All engines must be operated according to the manufacturer's operation and maintenance instructions to meet Subpart ZZZZ Good Air Pollution Control Practices listed in Condition 31.1, and minimize the time spent at idle during startup.

- Condition 31.1c. To be classified as an emergency stationary engine, EU IDs 11, 12, 13, 17 and CP-3 must be operated according to the following:
  i. Any operation of EU IDs 11, 12, 13, 17 and CP-3 for purposes other than emergency operation, maintenance and testing as described in Condition 31.1c(iii), and operation in non-emergency situations for up to 50 hours per calendar year, as permitted in Condition 31.1.c(v), is prohibited.
  ii. Maintenance checks and readiness testing of these units is limited to 100 hours per calendar year per engine.
  iii. EU IDs 11, 12, 13, 17 and CP-3 may be operated up to 50 hours per calendar year in non-emergency situations, but those hours shall be counted towards the 100 hours per calendar year provided for in Condition 31.1c(iii).
- Condition 31.1.d. Monitor EU IDs 11, 12, 13, 17 and CP-3 using a non-resettable hour meter at all times that the emission unit is operating except for monitor malfunctions, associated repairs, and required quality assurance or control activities.
- Condition 31.1.e. For EU IDs 11, 12, 13, 17 and CP-3, the Permittee shall comply with the following emissions management practices no later than May 3, 2013: 1) change oil and filter every 500 hours of operation or annually, whichever comes first; 2) inspect air cleaner every 1000 hours of operation or annually, whichever comes first; 3) inspect all hoses and belts every 500 hours of operation or annually, whichever comes first and replace as necessary.
- Condition 31.1.f. For EU ID CP-6, the Permittee shall comply with the following emissions management practices no later than October 19, 2013: 1) Change the oil and filter every 2,160 hours of operation or annually, whichever comes first; 2) inspect the air cleaner every 2,160 hours of operation or annually, whichever comes first; 3) inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.

Finding(s): Hilcorp certified continuous compliance with the good air pollution control practices, and maintenance requirements of Table 2d to Subpart ZZZZ, except for Subpart ZZZZ recordkeeping in the 2017 ACC. Hilcorp certified continuous compliance with with the good air pollution control practices, and maintenance requirements of Table 2d to Subpart ZZZZ in the 2018 ACC. Hilcorp indicated that the emergency engines were equipped with non-resettable hour meters in the 2017 and 2018 ACCs. In its July 15, 2019 Information Request (IR) response, Hilcorp provided maintenance records and a compliance summary as requested.

On August 17, 2017 Hilcorp submitted a PD for failing to complete Subpart ZZZZ air cleaner inspections, hoses, and belt inspections on EU IDs CP-3 and CP-6 in 2016. The 2017 ACC should have listed Subpart ZZZZ Emission Management Practices intermittently out of compliance as well.

The July 29, 2019 response included Subpart ZZZZ Maintenance Records for EU IDs 11-13, CP-3, and CP-6. The response did not include oil analysis for work orders NS322040, 332533, NS339824, 2196324, 1679906, NS39826, 1215242, 1463282, and 2200887. On August 1, 2019 the Department send a second request asking for these documents. EU IDs 11-13 and CP-6 had the required maintenance completed for 2017 and 2018. However, for EU ID CP-3, the oil analysis associated with work order NS339826 was lost and Hilcorp was unable to provide the Department with a copy. Since 2017 and 2019 oil analysis passed, the Department will assume compliance was maintained.

Assumed Compliance

H. 40 CFR 63 NESHAP Subpart CCCCCC

EU ID 26 consists of a gasoline storage tank and associated equipment with a total throughput of greater than 10,000 gallons and < 100,000 gal/month located at the fuel island at A Pad. MPU is therefore classified as a gasoline dispensing facility and is subject to Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities and must comply with applicable parts of the Subpart.

- Condition 32 of Permit No. AQ0200TVP02 Rev 4 requires that the Permittee operate and maintain EU ID 26, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Additionally, MPU must record occurrence and duration of each malfunction of operation or the air pollution control and monitoring equipment and report the incidences that occurred during the previous calendar year (if they occurred) by March 15 of each year. Submerged fill pipes are required to be installed on the storage when throughput is greater than 10,000 per month. In addition, The Permittee must have records available within 24 hours of a request by EPA or the Department to document gasoline throughput.

Finding(s): Hilcorp certified continuous compliance with NESHAP Subpart CCCCCC in the 2017 and 2018 ACC.

In Compliance

I. 40 CFR 63 NESHAP Subpart JJJJJJ

NESHAPS Subpart JJJJJJ applies to all oil-fired boilers in accordance with the provisions for applicability in §63.11194. The oil subcategory includes any boiler that burns any liquid fuel and is not in either the biomass or coal subcategories. Dual fuel fired boilers that burn liquid fuel during periods of gas curtailment, gas supply emergencies, or for periodic testing not to exceed 48 hours during any calendar year are not included in this definition. EU IDs 7 and 8 are dual-fired emission units that are classified as gas-burning boilers under the provisions of the rule.

- Condition 33. The Permittee shall monitor, record, and report as follows to document that EU IDs 7 and 8 qualify for the gas-fired boiler exemption in 40 CFR 63 Subpart JJJJJJ:

- Condition 33.1. Each month, monitor and record the calendar-year-to-date operating time on liquid-fuel for each of EU IDs 7 and 8;
- Condition 33.2. Report using the operating report of Condition 95, the data recorded for each month under Condition 33.1 for the period covered by the report;
- Condition 33.3. Certify annually under Condition 96, that the calendar-year total operating time of each of EU IDs 7 and 8 on liquid fuel has not exceeded 48 hours while testing on liquid fuel and operate EU IDs 7 and 8 on diesel fuel only during periods of gas curtailment or gas supply emergencies.

Finding(s): Hilcorp provided the hours operated each month during the evaluation period in the quarterly FORs. The greatest reported hours of operation was 111.0 hours in July 2018 for EU ID 8. Hilcorp certified continuous compliance in their 2017 and 2018 ACCs.

In Compliance

J. 40 CFR 61 NESHAP Subpart M

National Emission Standard for Asbestos - MPU is required to notify the Department when there is a demolition or renovation of regulated asbestos containing material or non-friable asbestos materials at the MPU.

Finding(s): No NESHAP Subpart M reports and/or notifications were submitted to the Department during the evaluation period. Additionally Hilcorp certified continuous compliance in the 2017 and 2018 ACCs.

In Compliance

K. Other Federal Requirements

Condition 35 of Permit No. AQ0200TVP02 Rev. 4 subjects MPU to the following federal requirements:

- Subpart F - Refrigerant Recycling and Disposal. MPU shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F. Applicable requirements include 40 CFR 82.154, 82.156, 82.161, 82.162, and 82.166.
- Subpart G - Significant New Alternatives Program. The MPU is subject to sections 40 CFR 82.174(b) through (d) of this program, which pertain to the use of substitute products for ozone-depleting compounds.
- Subpart H - Halon Emissions Reduction Prohibitions - Halon Emissions Reduction. The MPU is subject to sections 40 CFR 82.270(b) through (f).

Finding(s): Hilcorp certified continuous compliance with Subpart F, G, and H in their 2017 and 2018 ACCs.

In Compliance

VI. State Standards

A. Visible Emissions Standard

Conditions 1 through 5 prohibit visible emissions (VE), excluding condensed water vapor, emitted from EU IDs 1 through 15, 17, 18, 18A, 21, 25, CP-1, CP-2, CP-3, CP-4, CP-6, CP-7, T-1, T-2 and T-3 and from all fuel burning units authorized in Conditions 36 and 37 from reducing visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes in any one hour. Condition 2 requires periodic VE monitoring of the EUs according to a Method 9 Plan as specified below:

- Condition 1.1. For EU IDs 3 through 6, 9, 10, CP-1, CP-2, CP-4, CP-6, T-1, T-2 and T-3, burn only gas as fuel.
- Condition 1.2. For EU IDs 11 through 15, 17 and CP-3, as long as they do not exceed 400 hours of emergency and non-emergency operation per 12-month period, monitoring shall consist of an annual certification of compliance with the opacity standard under Condition 96 with the visible emissions standard.
- Condition 1.3. For EU IDs 1, 2, 7 and 8, use fuel gas as the primary fuel.
- Condition 1.4 For each heater and boiler authorized in Conditions 36 and 37 not meeting the definition of insignificant according to 18 AAC 50.326(d)-(i) and operated under this permit, the Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in Conditions 2 through 4.
- Condition 2.1b. For each heater and boiler authorized in Conditions 36 and 37, the Permittee shall perform visible emissions observations within two days of drill rig operation at a well pad.
- Condition 5. The Permittee shall observe one daylight flare event within 12 months after the preceding flare event observation or within 12 months after the permit effective date, whichever is later. If no event exceeds 18 minutes within that 12-month period, then the Permittee shall observe the next planned daylight flare event.

Finding(s): The Department received one (1) Method 9 Observation during the evaluation period for a flaring event that occurred on July 31, 2018 for EU ID 18A. The Department received eight (8) Method 9 Observations for the heaters and boilers on the Innovation Drill Rig.

The 2017 and 2018 ACC certified EU IDs 3 through 6, 9, 10, CP-1, CP-2, CP-4, CP-6, T-1, T-2 and T-3, burn only gas as fuel. The 2017 and 2018 ACC certified EU IDs 11 through 15, 17 and CP-3, as long as they do not exceed 400 hours of emergency and non-emergency operation per 12-month period. The 2017 and 2018 ACC certified EU IDs 1, 2, 7, and 8 used fuel gas as the primary fuel.

In Compliance

B. Particulate Matter Standard

Conditions 6 through 12 requires that the Permittee shall not cause or allow particulate matter (PM) emitted from EU IDs 1 through 15, 17, 18, 18A, 21, 25, CP-1, CP-2, CP-3, CP-4, CP-6, CP-7, T-1, T-2 and T-3, and from all fuel burning units authorized in Conditions 36 and 37 (excluding non-road engines (NREs)) to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

Monitoring for these EUs mirror the visible emissions requirements from Condition 2 and PM source tests are required when 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent.

Finding(s): The 2017 and 2018 ACC certified EU IDs 3 through 6, 9, 10, CP-1, CP-2, CP-4, CP-6, T-1, T-2 and T-3, burn only gas as fuel. The 2017 and 2018 ACC certified EU IDs 11 through 15, 17 and CP-3, as long as they do not exceed 400 hours of emergency and non-emergency operation per 12-month period. The 2017 and 2018 ACC certified EU IDs 1, 2, 7, and 8 used fuel gas as the primary fuel. No PM source tests were required during the evaluation period.

In Compliance

C. Sulfur Compound Emissions Standard

Condition 13 requires that the Permittee limit sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 15, 17, 18, 18A, 21, 25, CP-1, CP-2, CP-3, CP-4, CP-6, CP-7, T-1, T-2 and T-3, and from all fuel burning units authorized in Conditions 36 and 37 (excluding NREs) to no more than 500 ppm averaged over three hours.

- Conditions 13.1 - 13.3. Comply with Conditions 44 and 45 which require liquid fuel with no greater than 15 ppmw sulfur and Condition 49 which requires fuel gas with no greater than 100 ppm H2S by volume on a dry basis (ppmvd). Monitor, record, and report the liquid fuel sulfur content and the fuel gas H_2S content as described in Conditions 44 through 49 to demonstrate compliance with Condition 13. Within six months after the permit effective date, analyze a representative sample of EU ID 25 regenerator vent gas to determine the total sulfur concentration using GPA Standard 6377, or listed method approved in 18 AAC 50.035(b)-(c).
- Condition 13.4. For liquid fuel from a North Slope topping plant, the Permittee shall obtain from the topping plant the results of a monthly fuel sulfur analysis.
- Condition 13.7. For liquid fuel obtained from a third-party supplier, the Permittee shall keep receipts from the supplier that specify sulfur content and amount for each shipment of fuel.

Finding(s): The highest Fuel Gas Sulfur content was 24.0 ppm in January 2018. The highest KUTP Diesel Sulfur content was 0.12 wt%S or less during the evaluation period. The highest MOD-61 Diesel Sulfur content was 3.0 ppm during the evaluation period. Hilcorp certified the H_2S analyzed by hand-held Draeger tube using length-of-stain methodology. Additionally Hilcorp certified continuous compliance in the 2017 and 2018 ACC.

In Compliance

D. Insignificant Emission Units

Condition 14 limits all other EUs that are insignificant to the same VE, PM and SO_2 standards listed in Conditions 1 – 12. Moreover, the Permittee is required to report if an emission unit is insignificant because of historical actual emissions less than the thresholds

of 18 AAC 50.326(e) and if current actual emissions become greater than any of those thresholds.

Finding(s): Hilcorp certified in all the quarterly FORs that no emission units considered insignificant exceeded any of the thresholds of 18 AAC 50.326(e) during the reporting periods. Additionally, Hilcorp certified continuous compliance in the 2017 and 2018 ACC.

In Compliance

VII. Title I Permit Limits

A. Emission Unit Authorization

Air Quality Permit No. AQ0200MSS06 was issued on May 26, 2015 and has been incorporated into the Title V permit. Condition 36 of Permit No. AQ0200TVP02 Rev. 4 authorizes Hilcorp to concurrently operate up to 12 transportable drill rigs listed in Section 12, in accordance with the terms and conditions of this permit, for drilling operations that are conducted at aggregated well pads associated with the Milne Point Production Facility. Additionally, heaters and boilers authorized under the minor permit are subject to the same VE, PM, and sulfur compound emission standards from Section VI of this FCE.

- Condition 37 Alternative Rigs. The Permittee may use an alternative drill rig not listed in Section 12 without requesting a permit revision as follows:
  - 37.1 No less than seven days prior to operating an alternative drill rig, provide notification to the Department via email or facsimile. Include in the notification a list of the emission units (EUs) and associated ratings.
  - 37.2 The alternative rig shall be operated in accordance with all terms and conditions of this permit.
- Condition 38 The Permittee shall notify the Department via email or facsimile when relocating a drill rig to or from a well pad location where drilling operations are authorized under this permit.
- Condition 38.1 Permit No. AQ0200TVP02 Rev. 4. In each operating report required by Condition 71, provide a summary of drilling operations that were covered by this permit during the reporting period, and projected operations during the next reporting period. In the summary, indicate, for each drill rig and associated equipment operating under this permit, the well pad location of each drilling activity that occurred or is occurring during the reporting period.

Finding(s): Hilcorp submitted four (4) relocation notifications during the evaluation period. The relocation notification submitted on December 29, 2017 stated the Innovation Drill Rig would be relocating on or around January 10, 2018 to F-Pad. The Minor Permit No. AQ0200MSS07 effective on August 24, 2017 disaggregated Well Pads A, D, and F through K. Therefore, the relocation notification submitted on December 29, 2017 for F-Pad was not needed.

In Compliance

B. Owner Requested Limits for Ambient Air Quality Protection

Liquid Fuel Sulfur Requirements

- Per Condition 44, the Permittee shall burn liquid fuel with no greater than 15 ppmw sulfur in any of the fuel-burning equipment listed in the inventory table of this permit in order to protect the 3-hour, 24-hour and annual Class II SO_2 increments:
- Condition 44.1. For EU IDs 1 and 2 (Subpart GG turbines) obtain records of the sulfur content of the liquid fuel as required in Condition 26.3;
- Condition 44.2.For all other fuel burning equipment listed in Table 1, measure the sulfur content of the fuel oil in the sales tank at the Prudhoe Bay or Kuparuk Topping Unit according to ASTM D396-92 every time the fuel supply changes.

Finding(s): The highest Fuel Gas Sulfur content was 24.0 ppm in January 2018. The highest KUTP Diesel Sulfur content was 0.12 wt%S or less during the evaluation period. The highest MOD-61 Diesel Sulfur content was 3.0 ppm during the evaluation period. Hilcorp certified the H2S analyzed by hand-held Draeger tube using length-of-stain methodology. Additionally Hilcorp certified continuous compliance in the 2017 and 2018 ACC.

In Compliance

- Condition 45. Liquid Fuel Sulfur Requirements. To protect the 1-hour, 3-hour and 24-hour SO_2 Alaska Ambient Air Quality Standards (AAAQS) the Permittee shall fire only liquid fuels with a sulfur content not to exceed 15 ppmw -ultra-low sulfur diesel (ULSD) in all EUs composing any drill rig authorized under this permit, including non-road engines, when operating on liquid fuel.
- Condition 46. To protect the 1-hour, 3-hour and 24-hour SO_2 AAAQS and the 24-hour PM-10 AAAQS, the Permittee shall limit total fuel usage to 490 gallons per hour, per well pad.
- Condition 47. To protect the annual NO_2, annual SO_2, and annual PM-2.5 AAAQS, the Permittee shall limit the rolling 12-month fuel usage to 1,250,000 gallons per well pad. The annual fuel use limit is cumulative for drill rig EUs authorized by this permit and used during drilling operations at a single pad, with allowance for the fuel use equivalency factor in Table 2 when operating Tier 2/Tier 3 engines.

Note: Tables called "A" and "B" in Permit, but referred to as "1" and "2" in Permit Conditions.

Additional fuel sulfur requirements apply to the emission units permitted under Permit No. AQ0200TVP02 Rev. 4 as follows:

Finding(s): In each relocation notification received by the Department, Hilcorp included the maximum hourly fuel usage ratings. The maximum hourly fuel usage for the Innovation Drill Rig is 375.8 gph, under the maximum limit of 490 gph.

The Department re-calculated the 12-month rolling totals and found discrepancies. On August 7, 2019 the Department asked Hilcorp to verify the 12-month rolling totals for the

well pads. On August 13, 2019 Hilcorp submitted revised FORs to reflect the correct 12-month rolling totals. Hilcorp noted beginning 1Q17, the use of the permitted equivalency factor of 0.596 for the Tier2/Tier 3 engines was not consistently applied to the reported monthly diesel fuel usage.

In Compliance

Liquid Fuel Consumption Limit

- Per Condition 48, burn no more than one million gallons of liquid fuel per 12 consecutive months at the CFP, B-Pad and E-Pad in all of the equipment listed in Table 1 of this permit, and all other fuel burning equipment that may be present on the specified pads. Liquid fuel burned in motor vehicles and insignificant EUs as defined under 18 AAC 50.326(d) through (i) is excluded from the one million gallons limit. EUs on rotary drill rigs shall not be excluded as insignificant EUs.

Finding(s): Hilcorp submitted the required information in each quarterly FOR during the evaluation period.

In Compliance

Fuel Gas Sulfur Requirement

- Condition 49 requires that the Permittee burn fuel gas with no greater than 100 ppmvd H_2S in any of the fuel burning equipment listed in Table A. For fuel gas burning equipment listed in Table 1, measure the H_2S content of the fuel gas monthly using length-of-stain-tube analysis as indicated in the EPA approval letter dated January 18, 1990.

Finding(s): The highest Fuel Gas Sulfur content was 24.0 ppm in January 2018. The highest KUTP Diesel Sulfur content was 0.12 wt%S or less during the evaluation period. The highest MOD-61 Diesel Sulfur content was 3.0 ppm during the evaluation period. Hilcorp certified the H2S analyzed by hand-held Draeger tube using length-of-stain methodology. Additionally Hilcorp certified continuous compliance in the 2017 and 2018 ACC.

In Compliance

Operating Hour Restrictions

- Conditions 50 and 52 limit the annual operating hours of EU IDs 7, 8, 11, 12, 13, 14 and 15, 16, and 17. Condition 60 limits the concurrent operations of the two flares (EU IDs 18 and 18A) to no greater than 72 hours during each flare shutdown or startup.

EU ID	Permit Limit (hours)	Maximum Hours Operated
7 & 8	200	115.92
11, 12, & 13	900	223.44
14 & 15	600	52.54
16	1,344 (at CFP, B-Pad, E-Pad)	N/A[1]
17	300	N/A[1]

1- EU IDs 16 and 17 were removed prior to the evaluation period.

Finding(s): Hilcorp provided the monthly operating time and the 12-month rolling totals for EU IDs 7 & 8, 11, 12, & 13, 14 & 15, 16, and 17. There were no limit exceedances during the evaluation period.

The Permittee reported the 12-month rolling hours for each emission unit listed in Table C. No EU operated more than its respective limit. EU 16 & 17 were reported as removed.

12-month Operating Hours on Diesel			
EU ID	**Apr**	**May**	**Jun**
7 & 8	116.45	116.45	116.45
11, 12, 13	224.03	222.72	221.95
14 & 15	51.78	50.82	52.60
16	0.0	0.0	0.0
17	0.0	0.0	0.0

The Department re-calculated the 12-month rolling totals for the above units and found the following discrepancies.

12-month Operating Hours on Diesel			
EU ID	**Apr**	**May**	**Jun**
7 & 8	116.4	0.5	0.5
11, 12, 13	221.04	39.64	37.24
14 & 15	48.54	48.44	44.44
16	0.0	0.0	0.0
17	0.0	0.0	0.0

In Compliance

Daily Operating Scenarios

To protect the 24-hour PM-10 Class II increment, Condition 51 requires that the Permittee operate under Scenario 1 to curtail liquid fuel use and only operate using liquid fuel if fuel gas is unavailable or during required source testing (Scenario 2).

Finding(s): Hilcorp provided a daily log that included the operating scenario and compliance data during the quarterly FORs during the evaluation period. Hilcorp certified continuous compliance in the 2017 and 2018 ACCs.

In Compliance

C. BACT Limits

Heater CO and NOx BACT Limits

- Condition 54 limits CO or NO_X emissions from EU IDs 3 through 10 from exceeding certain limits and prevents the Permittee from operating EU IDs 9 and 10 on liquid fuel. Periodic source testing is required to demonstrate compliance with the short –term NO_X BACT limit and the CO BACT limit. The Permittee must conduct source tests on each of the EU IDs no later than 12 months after the effective date of this permit and every five years thereafter.

Finding(s): The initial source tests were previously conducted for EU IDs 3, 5, 8, and 9 (as representative of like units: EU IDs 4, 6, 7, and 10) on June 21 and October 9 – 10, 2013. The most recent source test conducted for EU IDs 4, 5, and 7 (as representative of like units: EU IDs 3, 6, 8, 9, and 10) on June 30, July 1 – 2, 2018. All source tests passed the applicable limits. *See Section X.D for more information.*

In Compliance

Turbines BACT and PSD Avoidance Limits

- Condition 55 establishes limits short –term CO, NO_X, SO_2 and PM BACT limits and annual PSD avoidance emission limits for EU IDs 1 and 2 and EU IDs T-1 through T-3 as applicable.

Pollutant	Permit Limit	Maximum Emission
NO_X	625 TPY	566.6 tons (1Q19)
CO	94.4 TPY	81.49 tons (EU ID 2, 1Q19)
PM	28 TPY	13.3 tons (2Q17)
SO_2	100 ppmv (fuel gas) or 0.0015 wt.% (liquid fuel)	21.9 ppm (2Q18)

Finding(s): T-1 through T-3 are not onsite. EU IDs 1 and 2 did not exceed the emission limits listed in Air Quality Permit No. AQ0200TVP02 Rev. 4 during the evaluation period. The calendar quarter in which the maximum tons of emissions occurred, as reported by the Permittee, are summarized above.

In Compliance

Turbine NOx Load Limits

- Condition 56 requires the Permittee to comply with NO_X BACT limits for EU IDs 1 and 2 by using DWI, except during start-up, emergency fuel transfer, emergency

operations, and other emergencies. DWI is required at all times when operating the turbines on liquid fuel above 9,500 kW. During DWI start-up, emergency fuel transfer, emergency operations, and other emergencies, the Permittee shall operate no more than two hours per turbine per incident without DWI. If not using DWI and burning fuel gas, operate at no greater than 21,371 kilowatts (kW) generator output. 94.c: If using DWI, restrict load to the maximum at which compliance was demonstrated for fuel gas or liquid fuel oil during any source test required for Condition 65.1a(ii) and 65.1a(iii).

Finding(s): The original 1Q19 FOR included the operating load logs for EU ID 1 and 2. It indicated EU ID 2 had operated during the reporting period on diesel without DWI for more than 2 hours. In response to the information request sent on May 29, 2019, Hilcorp submitted a revised 1Q19 FOR amending the operating load logs for EU ID 1 and 2. The amended logs indicated EU ID 2 did not operate on diesel without DWI for longer than 2 hours.

In Compliance

VOC BACT Limits for Oil Reserve Tanks, and B-Pad and C-Pad Vents

- Condition 57 requires the Permittee to provide gas blanketing and backpressure relief valve for EU ID 23, the oil reserve tank.
- Condition 58 limits vent emissions from B-Pad and C-Pad to no greater than 36.5 tons of VOCs for each 12 month rolling period per vent.

Finding(s): Hilcorp has certified continuous compliance with this condition in the 2017 and 2018 ACCs.

In Compliance

D. Owner Requested Limits to Avoid PSD Modification

To avoid a PSD modification for NO_x, CO, SO_2 and PM and minor permitting under 18 AAC 50.502(c)(3) for NOx, the following are required:

Operation of Supplemental Combustion Turbines

- Condition 59 limits the concurrent operation of one or more of the supplemental turbines (EU IDs T-1 through T-3) with both EU IDs 1 and 2 to no more than 1,000 hours during any 12 consecutive month period and requires the Permittee to operate each turbine on fuel gas only.

Finding(s): EU IDs T-1 through T-3 have not been present at the facility during the evaluation period. This was verified during the July 17, 2019 onsite inspection. Additionally Hilcorp has certified continuous compliance with this condition in the 2017 and 2018 ACCs.

In Compliance

Flare Operational Limit to Avoid PSD Modification

Condition 60.1 requires the Permittee to limit combined flare gas combustion from EU IDs 18 and 18A to no greater than 83 million standard cubic feet per day (MMscf/day).

Finding(s): Hilcorp has certified continuous compliance with this condition in the 2017 and 2018 ACCs.

In Compliance

Turbine and Heater PSD Avoidance Limits

- Condition 61.1 NO_X PSD Avoidance Limit. The Permittee shall avoid classification as a PSD modification for NO_X by emitting no more than 625 tons per year from EU IDs 1 and 2 combined.
- Condition 61.2 CO PSD Avoidance Limit for EU IDs 1 and 2. The Permittee shall emit no more than 94.4 tons per year of CO from each of EU IDs 1 and 2.
- Condition 61.3 CO PSD Avoidance Limit for EU IDs 7 and 8. The Permittee shall emit no more than five pounds of CO per 1,000 gallons of fuel combusted by each of EU IDs 7 and 8 when firing liquid fuel. Follow established preventative maintenance guidelines, and maintain records of maintenance completed. Retain maintenance records for five years and submit the records to the Department upon request.
- Condition 61.4 SO_2 PSD Avoidance Limit. For the SO_2 PSD avoidance limit, comply with the fuel sulfur limits, monitoring, recordkeeping, and reporting requirements set out in Conditions 44 through 49.
- Condition 61.5 PM PSD Avoidance Limit. EUs 1 and 2 shall emit no more than 28 TPY of PM with aerodynamic diameter less than or equal to a nominal 10 micrometers (PM-10). Maintain fuel flow meters on EU IDs 1 and 2 to measure fuel gas and liquid fuel usage. Maintain copies of documentation showing that the meters were calibrated to an accuracy of plus or minus five percent.

Finding(s): Hilcorp has not exceeded the NO_X limit of 625 TPY. Hilcorp has submitted the required report described in Condition 61.1(e) with the quarterly operating reports. However, the Department independently re-calculated the 12-month rolling totals and have noted several discrepancies from what Hilcorp submitted.

Department Calculations		**Hilcorp Reported Values**
Date	**NO_X**	**NO_X**
7/17	505.7	505.4
8/17	512.9	512.7
9/17	515.2	515.0
10/17	517.8	517.6

11/17	520.8	519.8
12/17	525.6	525.5
1/18	528.4	528.3
2/18	529.0	529.0
3/18	528.9	528.9
4/18	529.1	529.1
5/18	539.9	539.9
6/18	542.1	542.2
7/18	534.1	537.87
8/18	532.8	536.59
9/18	537.4	541.20
10/18	535.5	535.67
11/18	543.7	543.83
12/18	540.3	540.42
1/19	545.6	545.7
2/19	550.2	550.3
3/19	553.8	554.0
4/19	558.9	559.1
5/19	565.4	565.7
6/19	579.7	579.9

Hilcorp has not exceeded the CO limit of 94.4 TPY per turbine. Hilcorp has submitted the required report described in Condition 61.2(d) with the quarterly operating reports. However, the Department independently re-calculated the 12-month rolling totals and have noted several discrepancies from what Hilcorp submitted.

On August 13, 2019 Hilcorp submitted a revised FOR after identifying errors in the diesel use and CO emissions calculations in the 2017 FOR submittals. The errors cascaded in to the subsequent 12-month rolling totals.

Hilcorp has certified continuous compliance with Conditions 61.1 through 61.5 in the 2017 and 2018 ACCs.

In Compliance

Turbine NOx and CO Monitoring Requirements

- Condition 62. To monitor compliance with the NO_X and CO PSD avoidance standards and the CO BACT limits, the Permittee shall monitor process parameters hourly and calculate the NO_X and CO emission rates in pph no less than once per month for EU IDs 1 and 2.
    - Revise a correlation based on results of any biennial relative accuracy (RA) source test required by Condition 65. Submit the revisions for Department approval in accordance with Condition 63.
    - If two consecutive RA tests performed under Condition 65 for the Department-approved correlation exceed the limits in Condition 62.1b (i)

or 62.1b (ii), install and use a CEMS as described in Condition 64 no later than 120 days after submitting the report for the second failing test.

- Condition 63. Best-Fit Correlation Method. Submit to the Department for written approval, a report that describes any changes to the best-fit correlations between the emission rates for NO_X and CO from completed source tests and turbine process parameters. Include quality assurance procedures for the process parameters used in developing the correlation between the emission rates and the completed source tests.
- Condition 65.3. For turbine operation with a wet combustion liner, if an RA verification of any correlation is greater than the allowable limits in Condition 62.1.b, the Permittee must commence annual RA testing until five consecutive RA tests demonstrate compliance with the limits, then biennial testing may resume.

Finding(s): Hilcorp conducted an RA test on EU ID 1 on October 22, 2018. While EU ID 1 passed the applicable emission limits, it failed the NO_X and CO RA limits. The Department requested a re-test to establish if the values were correct. Hilcorp conducted the re-test on March 23-24, 2019, passing the NO_X RA limit, but failing the CO RA limit for a second time.

On June 24, 2019 Hilcorp submitted a request to establish a new PEMS calibration for Turbine 0701A. The Department sent a letter on July 10, 2019 approving this request.

In Compliance

VIII. Public Complaints

According to ADEC's complaint automated tracking system, the Department has not received any complaints during the period of this review.

IX. Records Research

On July 15, 2019, ADEC requested the following information from the stationary source in accordance with 18 AAC 50.200 in order to complete this compliance evaluation.

1. Review and make corrections as necessary to the attached Emission Unit Inventory form. We recognize that this information may have been previously submitted with Hilcorp's latest air permit application. However, we need to verify the accuracy of the information we have on file with the current Milne Point Production Facility's inventory.

   Response: Please see Attachment A for the most up-to-date emission unit inventory. This inventory reflects the emission units operating at CFP and E-Pads under the Title V Operating Permit. Units operating at B-Pad and C-Pad were disaggregated on March 12, 2019.

2. Review, and if needed, correct the attached Contact Information form. If a role holder is no longer in that position, please give an approximate end date.

Response: Please see Attachment B for an updated contact information form. Chad Helgeson replaced Robert York as the Area Operations Manager on January 1, 2019.

3. Provide a description of any upgrades, modifications, or improvements conducted at the MPU during August 1, 2017 to present that may have had an effect on air emissions.

   Response: The MPU Air Quality Permit Number AQ0200TVP02 has undergone several changes since August 1, 2017. These changes include the disaggregation of Pads A, D, F, G, H, I, J, and K under AQ0200MS07 on August 24, 2017 and the disaggregation of B and C Pads under AQ1558MSS01 and AQ1559MSS01 on March 12, 2019. There have been no upgrades, modifications, or improvements that would have an effect on air emissions covered under this permit from August 1, 2017 to present.

4. Provide the installation dates and replacement information (0701 or 0801) for Turbine 0701A between August 1, 2014 and the present. Additionally, please provide a reason why an off permit change notification for this equipment replacement was not submitted as provided under Condition 101 Permit No. AQ0200TVP02 Rev. 4.

   Response: EU IDs 1 and 2 (GT-0701 and GT-0801) are General Electric (GE) LM2500 gas turbines. Since assuming operatorship of the Milne Point Facility in 2014, Hilcorp has not installed or replaced either turbine.

   Turbine engines include a gas generator section and a power turbine section. Routine maintenance recommended by the manufacturer requires periodic overhauls of the gas generator and/or power turbine sections based on hours of operation, number of startups, or an inspection that indicates an overhaul is warranted. Routine overhauls of the gas generator and/or power turbine are a fundamental assumption of product design.

   At the time of acquisition, Hilcorp assumed ownership of three gas generators and continued the BP Alaska practice of rotating the three gas generators through EU IDs 1 and 2 during periodic overhauls. The three gas generators were originally purchased by BP to facilitate the overhaul process and are most easily tracked using serial numbers (SIN). In May 2017, the gas generator section (SIN 481-397) of EU ID 1 (GT-0701) was overhauled and gas generator section (SIN 481- 854) was rotated into the turbine. A summary of the gas generator overhaul history for EU IDs 1 and 2 since August 1, 2014 is provided below.

Date	**EU ID 1 (GT-0701)**	**Date**	**EU ID 2 (0801)**
08/01/2014 – 5/20/2017	481-397	08/01/2014-09/20/2017	481-880
05/22/2017 – Current	841-854	09/20/2017 – Current	481-397

An off-permit change notification under Condition 101 is not required for routine maintenance activities conducted on a turbine engine.

5. Please provide a summary of 40 CFR 63 Subpart ZZZZ applicability and compliance status for all EU IDs (11-13, 17, CP-3 and 14, 15 and CP-6) that are subject to 40 CFR 63 Subpart ZZZZ. Include copies of work orders for the required maintenance (oil change, air and fuel filter replacement, belts and hoses inspection) under Subpart ZZZZ. Note periods of emergency vs non-emergency use for engines classified as emergency engines from July 1, 2017 through June 30, 2019. If possible, please complete the attached NESHAP Subpart ZZZZ maintenance form.

   Response: EU IDs 11-13, 14, 15, 17, CP-3, and CP-6 subject to Subpart ZZZZ are currently in compliance.

   Please see Attachments C and D for Subpart ZZZZ maintenance records. Please note the following:
   - EU ID 17 was blinded from the fuel source on 12/23/2007; therefore no maintenance was conducted on this unit during the requested timeframe. In addition, this unit was disaggregated on March 12, 2019 with the issuance of AQ1558MSS01 for B-Pad.
   - EU IDs CP-3 and CP-6 were disaggregated on March 12, 2019 with the issuance of AQ1558MSS01 for C-Pad. Maintenance records for CP-3 and CP-6 are included up to March 11, 2019.

6. Please confirm whether simultaneous use of incinerators or flares in conjunction with drilling activities at any well pad occurred from July 1, 2017 to the present.

   Response: No incinerators or flares were used in conjunction with drilling activities at any well pad between July 1, 2017 and the present.

7. Please provide copies of all drilling rig relocation notifications from July 1, 2017 to the present.

   Response: Please see Attachment E for all the drilling rig relocation notifications under Permit Number AQ0200TVP02 for the period July 1, 2017 to the present.

8. Please provide copies of the monthly fuel consumption for each well pad from July 1, 2017 to the present.

   Response: Hilcorp understands this request to apply to drilling rig fuel consumption as stipulated under Conditions 46 and 47. Please see Attachment F for the monthly fuel consumption for each well pad for the period July 1, 2017 through June 30, 2019. Please note, beginning July 1, 2019, all MPU drilling activities began operating under Permit MG2.

9. Please provide copies of the excel spreadsheets showing the raw calculations used to calculate 2018 Emission Fee Estimates.

Response: Please see Attachment G showing the raw calculations for the Milne Point Facility 2018 Emissions Fee Estimates.

10. Please provide copies of the excel spreadsheets showing the raw calculations used to calculate monthly NOx and CO emissions for EU IDs 1 and 2 from January 1, 2018 through December 31, 2018.

Response: Hilcorp does not maintain excel spreadsheets with raw calculations for monthly NOx and CO emissions for EU IDs 1 and 2. Daily NOx and CO emissions are automatically calculated using approved PEMS equations by Hilcorp's Programmable Logic Control (PLC) and Supervisory Control and Data Acquisition (SCAD A) systems. Please see Attachment H for the excel document exported from these systems and used to calculate the monthly NOx and CO emissions for EU IDs 1 and 2.

X. Reports Reviewed

A. Operating Reports

Condition 95 of Permit No. AQ0200TVP02 Rev. 4 requires submittal of a semiannual operating report by May 15 for the period January 1 to March 31, by August 15 for the period April 1 to June 30, by November 15 for the period July 1 to September 30, and by February 15 for the period October 1 to December 31 of the previous year. ADEC has received and reviewed the following operating reports for the period of this review:

Reporting Period	Date Submitted	Compliance Status
April 1 – June 30, 2017	August 15, 2017 [1]*August 13, 2019*	**In Compliance**
July 1 – September 30, 2017	November 15, 2017 [1]*August 13, 2019*	**In Compliance**
October 1 – December 31, 2017	February 15, 2018 [1]*August 13, 2019*	**In Compliance**
January 1 – March 31, 2018	May 15, 2018 [1]*August 13, 2019*	**In Compliance**
April 1 – June 30, 2018	August 15, 2018 [1]*August 13, 2019*	**In Compliance**
July 1 – September 30, 2018	November 15, 2018 [1]*August 13, 2019*	**In Compliance**
October 1 – December 31, 2018	February 15, 2019 [1]*March 29, 2019* [1]*August 13, 2019*	**In Compliance**
January 1 – March 31, 2019	May 15, 2019 [1]*June 5, 2019* [1]*June 10, 2019* [1]*August 13, 2019*	**In Compliance**
April 1 – June 30, 2019	August 15, 2019	**In Compliance**

Notes:
1. Hilcorp submitted revised versions on the dates listed.

B. Annual Compliance Certifications

Condition 96 of Permit No. AQ0200TVP02 Rev. 4 requires submittal of an annual compliance certification to ADEC and EPA by March 31 of each year. ADEC has received and reviewed the following annual compliance certification reports for the period of this review:

Reporting Period	Date Submitted	Compliance Status
January 1 – December 31, 2017	March 28, 2018	**In Compliance**
January 1 – December 31, 2018	March 29, 2019	**In Compliance**

C. Excess Emissions and Permit Deviations

Condition 94 of Permit No. AQ0200TVP02 Rev. 4 requires the Permittee to report all emissions or operations that exceed or deviate from the requirements of this permit.

1. Excess Emissions

No excess emissions were submitted during the reporting period.

2. Permit Deviations

Report Date: July 12, 2018
Date Submitted: July 12, 2018
Event Date: July 9, 2018
Emission Units: 4, 5, and 6
Permit Conditions: 87
Description: Hilcorp received an extension to reschedule the referenced source tests to a later date than originally planned. After rescheduling the source tests, Hilcorp did not provide the required 10-day notification to the Department.
Corrective Action Taken: Hilcorp will better communicate schedule changes both internally and to the Department as well as utilize calendar reminders to keep track of all required notifications.

Report Date: June 3, 2019
Date Submitted: June 3, 2019
Event Date: May 24, 2019
Emission Units: 1
Permit Conditions: 88
Description: The STR for EU ID 1 was not submitted within 60 days of completing the source test. The test was conducted on March 23 and 24 and the test report was due by May 24.
Corrective Action Taken: The test report was submitted as soon as the omission was discovered.

Report Date: August 15, 2019
Date Submitted: August 15, 2019
Event Date: March 2018
Emission Units: CP-3
Permit Conditions: 90

Description: Hilcorp maintains EU ID CP-3 in accordance with 40 CFR 63, Subpart ZZZZ. As part of this maintenance effort, oil changes are required every 500 hours or annually, whichever occurs first. Operators have the option of using an oil analysis program in lieu of oil changes provided the analysis meets the requirements listed in Subpart ZZZZ. Work Order #NS339826 (attached) indicates the oil from EU ID CP-3 was evaluated in March of 2018 and an oil change was determined to not be required. On August 8, 2019, the oil sample analysis results from March 2018 could not be located in Hilcorp files.
Corrective Action Taken: It is Hilcorp practice to attach a copy of the Oil Analysis results to the Work Order in our Enterprise Asset Management (EAM) System. The importance of this practice to maintain compliance with our Title V Air Permit and Federal Regulations has been reiterated to our maintenance team.
Notes: Violation was found during the review of documents requested for the FCE. ***See Section XII for more information***.

D. Source Tests

1. Source Test Plans

Condition 86 of Permit No. AQ0200TVP02 Rev. 4 requires the Permittee to submit a plan to the Department within 60 days after receiving a request under Condition 80 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.

2. Source Test 10-Day Notifications

Condition 84 requires that at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

3. Source Test Reports

Condition 84 requires that within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030.

Report Date: December 11, 2017
Submitted Date: December 12, 2017
Scheduled Date: October 13, 2017
Plan Date: September 11, 2017
10-Day Notification Date: September 11, 2017
EU IDs: 1
Findings: The STP and 10-Day notification were received in compliance with the Conditions of Permit No AQ0200TVP02 Rev. 4. The source testing was conducted to ascertain the relative accuracy (RA) of the predictive monitoring and best-fit correlation algorithm for estimating NOx and CO emissions from EU ID 2 (GE LM-2500 Gas Turbine) in order to demonstrate compliance with Condition 65 of Permit

No. AQ0200TVP02 Rev. 4. The Department found no compliance issues with the report or the results.

In Compliance

Report Date: August 30, 2018
Submitted Date: August 30, 2018
Scheduled Date: June 21 – July 5, 2018
Plan Date: May 21, 2018
10-Day Notification Date: *Not Submitted*
EU IDs: 4, 5, and 7
Findings: The STP was submitted in accordance with the Conditions of Permit No. AQ0200TVP02 Rev. 4. Hilcorp did not submit a 10-Day Notification as required by Permit No. AQ0200TVP02 Rev. 4. Hilcorp submitted a PD on July 12, 2018, see ***section XII*** for more information. Testing was conducted on EU IDs 4, 5 and 7 at the Milne Point Production Facility (MPU) to demonstrate compliance with Condition 54 of AQ0200TVP02 Rev. 4. Based on the information provided, the Department did not identify any compliance issues with regard to the source testing requirements of the above-referenced permit.

Out of Compliance with the 10-day notification requirement of Condition 87

Report Date: December 18, 2018
Submitted Date: December 21, 2018
Scheduled Date: October 22-23, 2018
Plan Date: September 14, 2018
10-Day Notification Date: October 8, 2018
EU IDs: 1
Findings: The STP and 10-Day notification were received in compliance with the Conditions of Permit No AQ0200TVP02 Rev. 4. The Department received and reviewed the RATA source test report. The NO_X and CO testing was conducted from October 22-23, 2018 on EU IDs 1 to demonstrate compliance with the BACT limit in Condition 55 and the relative accuracy (RA) of the NO_X and CO Predictive Emission Monitoring System (PEMS) of Condition 65.1. Although the results showed compliance with the BACT limits of Condition 55, some of the relative accuracy (RA) calculations yielded values over the regulatory limits. In particular, the RA of the PEMS while EU ID 1 operated on fuel gas with direct water injection (DWI) is significantly over the threshold. The Department requested a re-test under Condition 80 of Permit No. AQ0200TVP02 Rev. 4.

In Compliance with Permit Conditions

Report Date: June 3, 2019
Submitted Date: June 3, 2019
Scheduled Date: March 23-24, 2019
Plan Date: N/A

10-Day Notification Date: March 11, 2019
EU IDs: 1
Findings: The Department did not require a plan to be submitted as this was a re-test. Hilcorp submitted a 10-Day Notification as required by Permit No. AQ0200TVP02 Rev. 4. The NO_X and CO testing was conducted from March 23-24, 2019 in response to the January 22, 2019 request to re-test of EU ID 1 to demonstrate compliance with the BACT limit in Condition 55 and the relative accuracy (RA) of the NO_X and CO Predictive Emission Monitoring System (PEMS) of Condition 65.1. Although the results showed compliance with the BACT limits of Condition 55, the relative accuracy (RA) calculations yielded values over the regulatory limits for CO again.

In Compliance with Permit Conditions

E. Federal Reports

Condition 97.1 of Permit No. AQ0200TVP02 Rev. 4 requires the Permittee to attach to the operating report required by Condition 95 for the period covered by the report, a copy of any NSPs and NESHAPs reports submitted to the EPA.

Finding(s):

Report Type	Report Date	Reporting Period	Compliance Status
1H17 EEMSP	July 28, 2017	1/1/17 – 6/30/17	**In Compliance**
2H17 EEMSP	January 30, 2018	7/1/17 – 12/31/17	**In Compliance**
2017 OOOOa	October 30, 2017	8/2/16 – 8/2/17	**In Compliance**
2017 OOOOa	March 26, 2018	8/3/17 – 12/31/17	**In Compliance**
1H18 EEMSP	July 30, 2018	1/1/18 – 6/30/18	**In Compliance**
2018 OOOOa	March 29, 2019	1/1/18 – 12/31/18	**In Compliance**
2H18 EEMSP	January 30, 2019	7/1/18 – 12/31/18	**In Compliance**
1H19 EEMSP	July 30, 2019	1/1/19 – 6/30/19	**In Compliance**

In Compliance

F. Relocation Notifications

37. Alternative Rigs. The Permittee may use an alternative drill rig not listed in Section 12 without requesting a permit revision as follows:

37.1. No less than seven days prior to operating an alternative drill rig, provide notification to the Department via email or facsimile. Include in the notification a list of the emission units (EUs) and associated ratings.

38. The Permittee shall notify the Department via email or facsimile when relocating a drill rig to or from a well pad location where drilling operations are authorized under this permit.

Findings:

Postmark Date	Well Pad	Move Date	Drill Rig	Compliance Status
September 25, 2017	C-Pad	October 5, 2017	Innovation Rig	**In Compliance**
December 29, 2017	F-Pad	January 10, 2018	Innovation Rig	**In Compliance**

May 2, 2018	C-Pad	May 2, 2018	Innovation Rig	**In Compliance**
November 8, 2018	E-Pad	November 18, 2018	Innovation Rig	**In Compliance**

In Compliance

G. Assessable Emission Estimate

Condition 71.1 states no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate (AEE), Box 111800, 410 Willoughby Ave., Suite 303,
Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.

Finding(s):

Reporting Period	Submitted	Compliance Status
January 1 – December 31, 2017	April 5, 2018	**Late Submission**
January 1 – December 31, 2018	March 21, 2019	**Accepted**

The 2017 AEE was submitted on April 5, 2018, passed the due date of March 31, 2018. According to Condition 71.2, the stationary source's assessable potential to emit of 1,645 TPY should have been used to determine the AEE.

The Department reviewed the 2018 AEE submitted on March 21, 2019. The 2018 AEE utilized the same emission factors for EU IDs 1 and 2, derived from the source test conducted on October 22-23, 2018 for EU ID 1. The Department believes utilizing the emission rates from the source test conducted in 2017 for EU ID 2 would yield more accurate emissions for the AEE. The Department also compared the final emissions for EU ID 1 and 2 reported in the 2018 AEE with the final emissions for EU ID 1 and 2 reported in the 4Q18 FOR and found notable differences.

Reported NO_x and CO Emissions EU ID 1 and 2							
4Q18 FOR (Hilcorp)		**4Q18 FOR (Department)**		**2018 AEE (Hilcorp)**		**2018 AEE (Department)**	
NO_x	CO	NO_x	CO	NO_x	CO	NO_x	CO
614.91	103.37	552.8	98.09	514.39	193.78	554.4	116.6

Per conversation on September 4, 2019, Hilcorp overestimates the AEE to ensure they will never underestimate. Hilcorp may in the future request that they can use the PEMS calculations to calculate estimates for future AEEs.

In Compliance

H. Other Reports

Some facilities may not be required to submit any other reports. If facilities are required to submit other reports, such as COBC items, 24 Hour Open Burn Notifications, or Facility Specific Technical Information, review those reports and list your findings here.

Report Type	Report Date	Reporting Period	Compliance Status
Predictive Correlation QA/QC Plan	August 9, 2017	N/A	**In Compliance**
Test Extension Request	May 17, 2018	N/A	**In Compliance**
New PEMS Request	June 24, 2019	N/A	**In Compliance**

XI. On-Site Visit

Inspector: Breanna Howard, Environmental Program Specialist

July 17, 2019
MPF: 60° F, wind 10 mph NW, visibility 10 miles

I arrived at the Milne Point Production Facility (MPF) around 8:30 AM with ADEC inspectors Hunter Mallinger and Dylan Morrison, and EPA inspectors John Pavitt and Christopher Williams. We met with contractor Mike Helms to discuss the two inspections that were to occur that day. ADEC inspectors Hunter Mallinger, Dylan Morrison and EPA inspectors John Pavitt and Christopher Williams would be accompanied by Mike Helms to conduct the onsite inspection for NSPS Subpart OOOOa while I would join Russ Robbins (Lead Plant Operator) for the FCE onsite inspection.

The two groups separated after lunch. I met with Russ Robbins in the control room and conducted a short interview. No upgrades, modifications, or improvements have been done to the facility or its emission units. The thirds gas generator that is swapped with EU ID 1 and 2 is stored in a shipping container onsite when it is not in use. The gas generators are shipped down to the contiguous United States for overhauls when needed. To the best of Mr. Robbins knowledge, all of the units are currently permitted to their highest ratings.

We began the onsite inspection by observing EU IDs 14 (PU-0110A) and 15 (PU-0110B). At the time of the inspection EU ID 14 has 1938 hrs and EU ID 15 had 2469 hrs. Next we observed EU IDs 11 (PU-0101A), 12 (PU-0101B), and 13 (PU-0101C). Mr. Robbins explained that these units have a preventative maintenance schedule every month where the units run for approximately 30 minutes. We observed EU IDs 7 (H-5701A) and 8 (H-5701B). Mr. Robbins explained that only one of these units run at a given time, at the time of inspection EU ID 8 was running. We walked over to where EU ID 1 and 2 are housed. The lights in the housing for EU ID 1 were out, for safety reasons we did not enter. EU ID 2 was operating and for safety reasons we did not enter the housing. Mr. Robbins introduced me to Matt Landon who continued the tour.

We observed EU IDs 3 and 4, the operators explained that these units run very clean and the computer in the control room keep track of the fuel. We observed the storage tanks T-6102A, T-6102B, T-6001 (EU ID 23), T-6101A, and T-6101B (EU ID 23). Mr. Landon explained

T-6102A and T-6102B have been abandoned in place. From the storage tank location we observed the horizontal (EU ID 18) and vertical (EU ID 18A) flares. EU ID 18A was operating at the time of inspection, no visible emissions were observed. I conducted two Method 9 observations for EU IDs 1 and 2, no visible emissions were observed. I thanked Mr. Robbins and Mr. Landon for escorting me through the facility and concluded my onsite inspection for the FCE. I joined the EPA inspectors for the NSPS Subpart OOOOa joint inspection, *See Section V.E for additional information.*

See attached photo log for photos taken during July 17, 2019 onsite inspection.

XII. Compliance Issues

According to Permit No. AQ0200TVP02 Rev. 4 and Alaska Air Quality Control Regulations, the stationary source appeared out of compliance with the following during the period of this review:

Condition 87	**Test Notification. Except as provided in Condition 84, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.**
Finding	The Department did not receive a 10-day notification for the June 21 – July 5, 2018 source testing of EU IDs 4, 5, and 7. Hilcorp submitted a Permit Deviation report on July 12, 2018.
Condition 88	**Test Reports. Except as provided in Condition 84, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 91. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.**
Finding	The source test report submitted on June 3, 2019 was submitted past the 60 days after test completion. Hilcorp submitted a Permit Deviation report on June 3, 2019.
Condition 90	**Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:** **90.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and** **90.2. Records of all monitoring required by this permit, and information about the monitoring including:** **a. the date, place, and time of sampling or measurements;** **b. the date(s) analyses were performed;** **c. the company or entity that performed the analyses;** **d. the analytical techniques or methods used;** **e. the results of such analyses; and,**

	f. the operating conditions as existing at the time of sampling or measurement.
Finding	In response to the Departments second request of records, sent on August 1, 2019, Hilcorp provided copies of oil analysis that was previously not submitted in response to the first request of records sent on July 15, 2019. The second response indicated that the oil analysis for work order NS339826 was lost and Hilcorp was unable to provide the Department with a copy of the record. Hilcorp is required by Condition 90 to retain all copies of monitoring analyses for 5 years. Hilcorp submitted a Permit Deviation report on August 15, 2019 for the missing record.
§60.5397(h)(1)	**Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.**
Finding	Hilcorp is required by NSPS Subpart OOOOa §60.5397(h)(1) to repair or replace each identified source of fugitive emissions as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions. NSPS Subpart OOOOa §60.5397(h)(2) allows Hilcorp to place the leak on delay of repair for up to two years if the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit. Hilcorp's 2018 Annual NSPS Subpart OOOOa included the Facility Record No. 7, Milne Point Unit B Pad, survey conducted October 18, 2018 that reported the fugitive emission component was successfully repaired on November 19, 2019, 32 days after the leak was detected. The record stated that the component was not placed on delay of repair.

XIII. Conclusion

As a result of ADEC's Air Quality Full Compliance Evaluation conducted with on-site visit, the Stationary source was found to be operating out of compliance with requirements of Permit No. AQ0200TVP02 Rev. 4 and Air Quality Control Regulations.

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